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ATG Special Report -- Some Considerations in Selecting Scientific Journal Backfiles

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identification of novel uses of technology in support of managing library operations is very crucial. Therefore, the leadership needs to A) foster the culture of identifying innovative use of technology; B) encourage staff to look into new technologies and their applications; and C) recognize and reward those employees that identify ICT solutions.

As an additional and widely demanded measure, academic libraries should also expand their efforts in identifying open access sources enabling them to provide access to contents for those who are researching to identify innovations. There is a limitless number of open access repositories, publications and sites conducted and supported by governments, academic institutions, professional groups and individuals. Libraries should make the most of these sites and compliment their existing collection with contents from open access sites.

The role of educating administrators and policy makers about the importance of avoiding funding cuts for academic programs and library collections is the responsibility of everyone in the academic community. These

efforts should not be limited to only local administrators but rather it should be carried out at all levels of local, state and national governments. I feel certain that national professional library organizations, such as **American Library Association (ALA)**, understand their critical role during these challenging times. Instead of seeking a bailout, rely on educating policy makers about the importance of investing in knowledge acquisitions, and making information available to researchers, educators, and knowledge seekers. In a time when everyone is fighting for a share of the funding, library leadership should fight for their fair share as well.

The role that library collections and librarians play in aiding the floundering economy should not be underestimated. The best remedies for an ailing economy are education and knowledge. This does not mean that educational programs and access to knowledge are not important during economic prosperities, but that these resources are much more essential and have a substantial impact in periods of economic strife. Unfortunately, society does not generally understand the importance that libraries play in upholding the basis of human civilization, communication, knowledge and innovation. Perhaps, the kind of care that

librarians provide to the ailing economy could be equated to that of nurses in assisting patients through illness. With all things considered, now is a time to act, preserve, and persevere. Let's do our part to help aid the recovery! 🐼

Endnotes

1. **University of California, Berkley, Center for Studies in Higher Education**, "College vs. Unemployment: Expanding Access to Higher Education Is the Smart Investment During Economic Downturns", November 2008, <http://cshe.berkeley.edu/publications/publications.php?id=324> (accessed December 10, 2008).
2. **Department of Finance Canada**, "Advancing an Innovative Economy," A Plan for Growth and Prosperity — Chapter 5, November 2005, <http://www.fin.gc.ca/ec2005/agenda/agc5e.html> (accessed December 9, 2008).
3. *The Chronicle of Higher Education*, "Students and Faculty Members Turn to Online Library Materials Before Printed Ones, Study Finds," October 2002, <http://chronicle.com/free/2002/10/2002100301t.htm>. (accessed December 9, 2008).

ATG Special Report — Some Considerations in Selecting Scientific Journal Backfiles

by **Ann Bolek** (Physical Sciences Bibliographer, Science & Technology Library, The University of Akron; Phone: 330-972-6264) <bolek@uakron.edu>

Library users expect us to provide them with access to more and more of their content in electronic format, including journal backfiles and archives. Researchers already liked to trace the history of their topic by looking up the articles cited in the articles they were reading. *Beilstein* and *Gmelin* have always indexed chemical information back to the 1770s, and *GeoRef* indexed geological information from 1785 to the present. Now, several other indexing and abstracting services have added earlier content to their databases, including *Biological Abstracts*, *Chemical Abstracts*, *Web of Science* (*Science Citation Index*), *COMPENDEX* (*Engineering Index*), and *INSPEC* (*Physics Abstracts*, *Electrical & Electronics Abstracts*, and *Computer & Control Abstracts*). The searching of these databases by our users now also creates a demand for the earlier journal literature. But, the budget to pay for that earlier content competes with the budget for recent content, and priorities must be made. This article covers some of the issues in selecting the earlier content and is intended for both librarians and publishers.

For librarians, a determination needs to be made in what is requested the most, what is available, and what is affordable. Most likely, users are requesting what is already available in the library's collection in paper

format, microform, or storage. But, if the organization's research focus has changed over the years, users may even be requesting articles not in the original collection. At **The University of Akron (UA)**, we have a strong research interest in polymers. UA belongs to the **OhioLINK** consortium, which includes most of the colleges and universities in Ohio. **OhioLINK** has loaded the full-text of many publishers' journals on its own server, although, for the **American Chemical Society (ACS)** journals, it has loaded only the metadata, and we access the full-text at the **ACS Website**. The **OhioLINK** server makes it easy to obtain usage statistics, and it is no surprise to us that the journal, *Polymer*, has the highest usage. Therefore, I assumed that there might be a great interest in the backfile for this title. The journal, *Macromolecules*, actually may be used more, but I do not have ready access to the **ACS** electronic journal statistics, and even though **OhioLINK** tracks the usage on this title through the metadata on its own server, many users access it directly at the **ACS Website**. **OhioLINK** purchased the **ACS** backfile, and so I did not need to consider that publisher for purchase or lease, or make the extra effort to get accurate usage statistics for **ACS** journals.

The next step is to determine if the backfile for the journal, *Polymer*, is available. Indeed,

it is available, but in a package with 107 other **Elsevier** materials science journals. Most of the scientific publishers make their backfiles available in packages with one or two exceptions, such as *Lancet* for **Elsevier**, and *Angewandte Chemie International Edition* for **Wiley**. It is likely that you will be paying for titles that have lower usage along with the highly used titles. To make a fairer, but certainly not perfect comparison, you should look at the usage on all of the titles in one package and compare it with the usage on all of the titles in another package. You might also look at the number of years available in the backfile for the highest used titles. And, if available, you might look at the usage on your paper, microform, and storage collections and interlibrary loan statistics.

For **The University of Akron**, the table on the next page shows which 30 journals had the highest number of downloads on the **OhioLINK** server in 2006. The publishers appearing most often in the list of the most downloaded journals are **Wiley**, **Elsevier** and the **American Psychological Association (APA)**. The **OhioLINK** server already includes the backfiles of the **APA** journals.

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Therefore, a determination should be made of which packages include the non-APA journals downloaded most and what their cost might be. Fortunately, both **Wiley** and **Elsevier** allow you to purchase their backfiles with a one-time fee that includes permanent access, and so they were easier to compare than if they had a pricing model different from each other.

The **Elsevier Materials Science** backfile includes *Polymer*, *Biomaterials*, *Progress in Polymer Science*, *European Polymer Journal*, and *Journal of Colloid and Interface Science* and cost \$46,220 to purchase in 2007 for our size institution. The **Elsevier Organic Chemistry** backfile includes *Tetrahedron* and *Tetrahedron Letters* and would cost \$32,270 to purchase in 2008, but only includes eight titles altogether, and the other titles are used a great deal less. *Angewandte Chemie International Edition* could be purchased outside of a package from **Wiley** in 2006 for \$11,000. The **Wiley Polymer** backfile includes *Journal of Applied Polymer Science*, *Journal of Polymer Science Parts A and B*, *Macromolecular Rapid Communications*, and *Macromolecular Chemistry and Physics* and cost \$22,000 to purchase in 2006. The **Wiley Materials Science** backfile includes *Advanced Materials* and cost \$11,000 to purchase in 2006. Therefore, the three **Wiley** backfiles could be purchased for approximately the same cost as the **Elsevier Materials Science** backfile, and the **Wiley** backfiles would include seven of the most downloaded titles, whereas the **Elsevier** backfile would include only five of the titles. Why was the **Wiley Materials Science** backfile considered at all, when it included only one of the most downloaded titles? Several of the other titles in this collection were deemed important from experience and are also of current interest to the university, including *Journal of Biomedical Materials Research Parts A and B* (657 downloads), *Journal of Vinyl & Additive Technology* (26 downloads), *Polymer Engineering & Science* (374 downloads), and *Polymer Composites* (119 downloads). The latter three journals are published by the **Society of Plastics Engineers (SPE)**, but provided electronically by **Wiley** and are on the **OhioLINK** server for the years 2004 to the present, whereas the Elsevier journals go back to 1995. If the **SPE** journals went back to 1995, I believe their usage would have been a great deal higher. Actually, it was a difficult decision to make about which to purchase first, **Wiley** or **Elsevier**, since they were so similar in cost. Of the titles in the top 30 downloads, *Polymer* started in 1960, whereas the *Journal of Polymer Science* started in 1946, *Journal of Applied Polymer Science* started in 1959, and *Makromolekulare Chemie*, the predecessor to *Macromolecular Chemistry and Physics*, started in 1947. So, the **Wiley** journals might be considered the start of the polymer literature, or at least the start of journals devoted entirely to the subject of polymers. *Macromolecules* began publication in 1968. Most other polymer journals began their publication in the 1960s or later.

Journal Title	Publisher	Downloads
Polymer	Elsevier Science	5157
Journal of Applied Polymer Science	Wiley	3981
Journal of Counseling Psychology	American Psychological Association	2854
Angewandte Chemie International Edition	Wiley	2751
American Psychologist	American Psychological Association	2379
Journal of Applied Psychology	American Psychological Association	2085
Journal of Polymer Science Part A: Polymer Chemistry	Wiley	2035
The Counseling Psychologist	Sage	2035
Journal of Applied Electrochemistry	Kluwer	1982
Macromolecules	American Chemical Society	1689
Journal of Personality and Social Psychology	American Psychological Association	1661
Advanced Materials	Wiley	1608
Chemical Communications	Royal Society of Chemistry	1575
Biomaterials	Elsevier Science	1523
Journal of Polymer Science Part B: Polymer Physics	Wiley	1368
Tetrahedron Letters	Elsevier Science	1234
Chemistry - A European Journal	Wiley	1182
The Journal of Chemical Physics	American Institute of Physics	1082
Journal of Power Sources	Elsevier Science	947
Progress in Polymer Science	Elsevier Science	897
Tetrahedron	Elsevier Science	890
Physical Review Letters	American Physical Society	882
Journal of Advanced Nursing	Blackwell Science	861
Journal of Educational Psychology	American Psychological Association	844
Macromolecular Rapid Communications	Wiley	842
Applied Physics Letters	American Institute of Physics	836
Macromolecular Chemistry and Physics	Wiley	820
European Polymer Journal	Elsevier Science	815
Journal of Colloid and Interface Science	Elsevier Science	814
Journal of Vocational Behavior	Elsevier Science	789

Another consideration is whether you already have the backfiles of the highest used journals in any other format, such as paper or microform. Of the scientific journals in the above table, we do not have any holdings for *Journal of Power Sources*, whereas this publication began in 1976, and our electronic access starts with 1995. Our paper and electronic access to *Advanced Materials* started with 1998, whereas this title began in 1989. So, electronic access to the backfiles of these two titles would give us access to several years we could not access before, except through interlibrary loan or pay-per-view. *Advanced Materials* was included in the **Wiley Materi-**

als Science backfile that we purchased first. *Journal of Power Sources* is included in the **Elsevier Chemical Engineering** backfile that I hope to purchase next. In 2006, we purchased all three of the abovementioned **Wiley** backfiles, and, in 2007, we purchased the **Elsevier Materials Science** backfile. **OhioLINK** purchased the backfiles of the **American Chemical Society**, **Royal Society of Chemistry**, and **Springer** (which includes **Kluwer**). **OhioLINK** has had access to the **American Physical Society**, **American Institute of Physics**, and **Institute of Physics** backfiles for several years.

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You may consider purchasing more than one backfile from a publisher at the same time in order to save money, and we were able to save five percent of the cost by purchasing all three **Wiley** backfiles together. But, trying to find the \$80,000 to purchase **Elsevier Chemistry (Complete)**, which includes *Chemical Engineering*, *Inorganic Chemistry*, *Organic Chemistry*, and *Physical and Analytical Chemistry*, in the same year would be difficult, even though it would save \$42,000 over purchasing them separately.

As mentioned earlier, **Wiley** and **Elsevier** allow you to purchase their backfiles for permanent access with a one-time fee, as does **Springer**. Some publishers allow you to lease each year, or purchase, but with a continuing access fee. I would like to purchase the **Taylor & Francis Chemistry** backfile, but finding the \$65,000 would be difficult, and I dislike the idea of paying a \$750 annual maintenance fee, in addition. Leasing the backfile at \$8,995 per year is also a considerable amount of money. Even though our users request a significant number of interlibrary loans for articles in this collection, it would be difficult to justify the cost of purchasing or leasing the backfile. Furthermore, the **Chemistry** backfile includes Parts A and C of the *Journal of Macromolecular Science*, but not Part B. Part B is included in the **Physics** backfile, which would cost an additional \$45,000 to purchase or \$5,450 per year to lease.

Before discarding or sending the paper formats to storage of titles which you have purchased electronically, compare the paper format with the electronic to ensure that all of the content is there. The **American Chemical Society** journals, *Analytical Chemistry* and *Environmental Science & Technology*, do not have the "A-Pages" online for the earlier years. The "A-Pages" contain the news, features, and departments, and have a separate numbering scheme and table of contents from the research articles. And, the supporting (supplementary) information for all of the **ACS** journals is not yet available online for the earlier years.

In many cases, **Springer** puts all of the content under one title, even though the journal may have had several title changes. That makes it difficult for users to find, if it is not under the title that is cited. As an example, all of the years for *Russian Chemical Bulletin* are available at **SpringerLink** under that title from 1952 to the present, but it is cited as *Bulletin of the Academy of Sciences of the USSR, Division of Chemical Science* from 1952 to 1991. In 1992, it changed the title to *Bulletin of the Russian Academy of Sciences, Division of Chemical Science*. In 1993, it became the current title, *Russian Chemical Bulletin*. Because many link resolvers use the ISSN to find the full-text, they will not find the earlier years of this title because each title change also had a change in the ISSN. Those databases which link with DOIs may work, however, including *Beilstein* and *CrossRef*.

There are various rationales for why a publisher may offer backfiles in packages rather than as individual titles. The packages usually include all of the title changes and many of the cessations, and it is much more efficient to sell several titles at the same time, than to sell titles one-by-one. However, as a librarian, I think I would save money by purchasing titles individually because I would purchase the titles which are requested the most from a variety of publishers, and as my budget permitted each year. As it is now, I shall purchase only those packages which contain a large number of titles that I want, and as I can afford them. I prefer to purchase backfiles with a one-time fee, giving me permanent access, without annual access fees. I need to obtain special funding to purchase the backfiles, that special funding is not available every year, and when it is available, the amounts vary from year to year. If I need to pay annual access fees, then eventually I may need to make a choice between renewing a current subscription and renewing access to a backfile.

I would like to have the pay-per-view option without jumping through hoops, such as registering and requiring that I remember a login ID and password for something that I am not going to access very often. I would also like to pay a reasonable price for this article. **Wiley** increased their pay-per-view price from \$25 to \$29.95 this year, and **Taylor & Francis** increased their's from \$32 to \$35. I would like to see **Portico** (www.portico.org) and **JSTOR** (www.jstor.org) offer the

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1952-1997

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Breaking All The Rules: Library Renovation at Catawba College

by **Steve McKinzie** (Library Director, Corriher-Linn-Black Library, Catawba College, Salisbury, NC 28144; Phone: 704-637-4449) <smckinzi@catawba.edu>

Column Editor's Note: *The following interview is fictional. The names of the library, its director, the issues involved, and the decisions made by the librarians and the college during the project, of course, are real and (as far as possible) perfectly accurate, but the interview itself never happened. It is rather a construct, a literary device used to highlight and explain the Catawba Library renovation experience. — SM*

Several of us here at *Against the Grain* recently visited **Catawba College** in Salisbury, North Carolina and its newly renovated and expanded **Corriher-Linn-Black**

Library. We had heard that the renovation was somewhat peculiar — somewhat out of the ordinary. In short, we had been told that the project was largely successful but clearly unorthodox — different from the way libraries were usually remodeled. We wanted to see for ourselves. From what we could discern before our visit, it seemed that **Catawba's** entire approach to its project invited two key questions. First, can you renovate your library on a shoestring and create something beautiful? And secondly, can you break all of the standard renovation rules and get away with it?

We didn't think so, but we couldn't wait

to find out. On a crisp autumn morning we drove up to Salisbury, a small town in the heart of the North Carolina Piedmont, just north of Charlotte to visit the library and to interview its director, **Steve McKinzie**. **Catawba** boasts of a solid curriculum, a nationally-recognized theatre department, a burgeoning athletic program, and now a newly reworked library.

We caught up with the director in his library office that afternoon, an office tucked away on the corner of the library's main floor.

ATG: *Well, Steve, thank you so much for being willing to be interviewed — to take on some of our questions.*

SM: On the contrary, it is an honor to have anything to do with *Against the Grain*. You've a great publication. It is great to have you here.

ATG: *Well, we are certainly impressed with what we've seen here so far. We just now took a tour with one of your librarians. The building looks great. You've a large mezzanine crammed with soft comfortable seating — a spacious information commons and a good many group study rooms.*

SM: Yes, beauty and warmth were some of what we were after. We are all pretty pleased with the results.

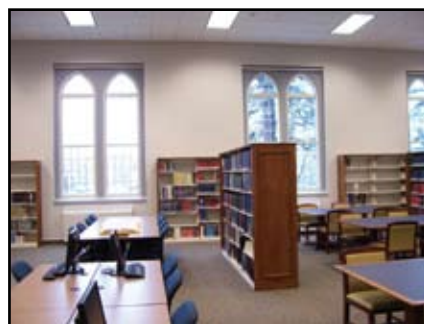
ATG: *Can you give us a sense of the project's scope? Try to give our readers an overview of what has been involved. How large was the library? How big is it now? Was it expanded?*

SM: Well, what we did was capitalize on the building's strengths. As you noted, we've a large open reading room area just as you enter the library. It now houses our information commons and reading area that sometimes doubles for receptions. As for the size, the library is about 25,000 square feet — rather small in a way, although the renovation actually expanded our square footage. There had been a small area in the lower level that had been home to computer services. They moved out just prior to the renovation. We took over their space. We've a basement, a main level, and a mezzanine.

ATG: *Did you say 25,000 square feet? That is really rather small for an academic library. It seems much bigger than that.*

SM: Well, you're right. It does seem larger. That's by design. We've very tall ceilings on our main level, as you noticed, and we've a number of tall windows. We took that airy sense of space and highlighted it by adding glass along the mezzanine. We also made sure that the mezzanine study rooms had glass doors and walls, what our architect called a "store front design." That brought in light from the outside and illuminated the building. It was all part of an effort to capitalize on our strengths and to give our public space — the soft seating in the mezzanine, the information commons in the main level, the **Wentz** reading room — a sense of warmth and size. On

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and, until last year, you could purchase an individual article from *Graft* at the **Sage** Website. Now the **Sage** Website tells you that after January 3, 2008, all content will be archived and available via **Portico**. When you go to **Portico**, there is no way to access the content, unless your organization subscribes. Why should my university pay thousands of dollars per year so that I can access one or two articles per year? The years, 2001 to 2003, of *Graft* are now available from **Stanford** and the **University of Edinburgh** via **CLOCKSS**, but what about Volumes 1 through 3, which correspond to the years 1998 to 2000?

I would prefer that the backfiles be offered for free, or, if not free, then included in the current subscription. The following Websites provide lists of titles for which at least some of their content is free:

Highwire Press: <http://highwire.stanford.edu/lists/freetart.dtl>

Directory of Open Access Journals: <http://www.doaj.org/>

J-STAGE [Japan Science and Technology Information Aggregator, Electronic]:
<http://www.jstage.jst.go.jp/browse/>

J-STAGE Archive: http://www.journalarchive.jst.go.jp/english/jnllist_en.php

PubMed Central: <http://www.pubmedcentral.nih.gov/>

ABC Chemistry: Free Full-Text Journals in Chemistry:
<http://www.abc.chemistry.bsu.by/current/fulltext.htm>

Free Medical Journals: <http://www.freemedicaljournals.com/>

Gallica: <http://gallica.bnf.fr/>

Additional content is being added, so you should check these sites at least a few times per year. Hopefully, more publishers will get the idea that this is the way to go. 🌿